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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,048	11/16/2001	Hikaru Kameyoshi	086142-0494	7951

22428 7590 02/23/2004

FOLEY AND LARDNER  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER
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KIM, SANG K

ART UNIT	PAPER NUMBER
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3654

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application N . 09/988,048	Applicant(s) <span style="float: right;">SW</span> KAMEYOSHI ET AL.	
	Examiner SANG KIM	Art Unit 3654	

\* The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-7 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) 2,4 and 8 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 and 18 is/are allowed.
- 6) ☒ Claim(s) 1,3,5-7 and 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>9</u> . | 6) <input type="checkbox"/> Other:  |

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5-7, and 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuno, GB 2347124 A, in view of Scheel et al, U.S. Patent No. 6073874.

Referring to claims 1, 3, 5-7, and 9-11, Mizuno shows a gas generator 15, a plurality of serial balls 20 which will be accelerated by the gas from the gas generator; a path for guiding the balls, and a rotational member 30 having a plurality of driving points 32 wherein said balls collide with said driving points so as to apply rotational torque to said rotatable member; wherein the driving points of said rotational member are partially positioned within said path, and wherein a space for passage of said balls is defined by said path and said driving points and is narrower than the diameter of said balls, wherein the pretensioner is configured so that a wall of the pipe 21j opposite the opening is elastically deformed by at least one of the balls during rotation of the gear as shown in Fig. 18 and as described in column 20, lines 19-62.

Mizuno does not disclose the entire surface of each of the plurality of balls is applied with a lubrication coating.

Scheel et al teach the surface of said balls and an interior surface of the pipe are applied with lubrication coating as described on column 4, lines 18-28, and Fig. 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Mizuno to apply lubrication coating to the surface of the balls and interior surface of the pipe as taught by Scheel et al to reduce friction between the pipe and the balls. It would have been obvious to one having ordinary skill in the art at the time the invention was made to coat the entire surface of the balls, and entire straight and curved interior surface, since it was known in the art that applying a lubrication coating on the entire parts would result in less friction between the pipe and the balls.

Referring to claims 12-16, Mizuno in view of Scheel et al disclose the claimed invention except for a certain type of lubrication. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a lubrication that is dry, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

***Allowable Subject Matter***

Claims 17-18 are allowed.

The following is an examiner's statement of reasons for allowance: The claims are patentable over the prior art of record because the teachings of the references taken as a whole do not show or render obvious the combination set forth in claims 17 and 18, including a method of lubricating a pretensioner set forth in the claims and the steps of applying a lubrication coating to the balls or pipe prior to assembly.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

Claims 2, 4, and 8 have been cancelled.

Applicant's arguments filed on 11/13/03 have been fully considered but they are not persuasive with respect to claims 1, 3, 5-7, and 9-16.

Applicants argue that Scheel does not teach "the entire surface of either the balls or the interior of the pipe is coated by a lubricant".

As noted in the grounds of rejection above, it would have been obvious to one having ordinary skill in the art at the time the invention was made to coat the entire surface of the balls, and entire straight and curved interior surface, since it was known in the art that applying a lubrication coating on the entire parts would result in less friction between the pipe and the balls. Note that Scheel also discloses that the lubricant capsule can be destroyed during assembly of piston 13 (column 4, lines 29-32). The grease would inherently circulate and coat the entire surface of the balls and the pipe.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 3654

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Kim whose telephone number is (703) 305-3712. The examiner can normally be reached Monday through Friday from 8:00 A.M. to 5:30 P.M. alternating Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (703) 308-2688. The fax phone numbers are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

SK

2/8/04



KATHY MATECKI  
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